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A
DISSERTATION
ON THE
Oleum Palmæ Christi,
Sive OLEUM RICINI;
Or, (as it is commonly call'd)
CASTOR OIL:

IN WHICH
Its HISTORY is illustrated; its PROPERTIES
and VIRTUES explained;
AND
Its USES in BILIOUS, CALCULOUS, and other
DISORDERS, recommended.

By PETER CANVANE, M. D.

(Of BATH)

And Member of the Royal College of
PHYSICIANS in LONDON.

Scribant alii, quibus ista mens est miracula ex audi u, ega
quod hisce oculis, & qualicunque meo iudicio percepi, vo
bis spectandum propono: *Jacobus Bontius,*

Palmaque nobilis. *Hor.*

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Off
J. H. Leg

DISSERTATION

ON THE

OLIVE OIL

AND ITS VARIOUS

USES

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PREFACE.

I HAVE lately read, with great pleasure, four elegant treatises on the *colica pictonum*, or *dry belly-ache*, written by four living and shining ornaments of the profession, in four different parts of Europe; I mean, by the incomparable Dr. *Huxham* of Plymouth; the judicious Dr. *de Haen* of Vienna; the learned Dr. *Thierry* of Paris; and the methodical Dr. *Tronchin* of Amsterdam.

Those gentlemen have treated the subject with the utmost art; have investigated the causes and symptoms with the greatest perspicuity; and have all unanimously agreed

agreed to commence the cure with *purgatives*; but unfortunately none of that class of medicines we know of, in the *materia medica*, are appropriated to this terrible disorder.

Laxatives, given in such quantities and form as may seem to answer the intention best, will frequently not stay on the stomach, on account of the great dose required to be taken; and *drastic, rough purges*, are condemned by all with great justice, as they draw the intestines into spasmodic contractions, and add irritation to irritation.

Therefore, as the *oleum palmae christi*, the subject of the following treatise, an incomparable medicine in this case, was not known to those learned gentlemen above-mentioned, I thought it wou'd not be unacceptable to the public, to see a few observations I have made
from

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from a practice of near fourteen years, in using and applying this oil; seven years of which I have constantly used it with success in America, and near seven years in my practice in England I have apply'd it occasionally, and as I cou'd procure it from abroad; and I can venture to affirm, that, except the *peruvian bark* in intermitting cases, I never met with a more valuable medicine in all *bilious complaints*, and some other disorders, which will be specified in the course of this pamphlet.

The truth of this assertion I do not doubt but will be attested by those gentlemen of the profession, who have ever practiced abroad, and used this oil either in the English or French Leeward Caribbee Islands.

Mr. *Frazer*, who, I am told, is surgeon to his majesty's troops of the

the island of Antigua, has some time ago given, in the *medical essays* of London, a very short but accurate account of some of the properties of this oil ; being the only tract I have ever seen published of it : which to me seems very surprising, as I am sure it has been used in those islands with success these thirty or forty years.—I cou'd have corroborated every assertion in the following treatise, by exhibiting cases I have by me, but was afraid of swelling this pamphlet to a volume ; which was not my design. Besides, I have not leave from several gentlemen and Ladies, of publishing their names in print ; without which I have always deemed it folly to publish cases, as it is very well known there is nothing easier than to adapt and form such cases, in order to support some particular favourite hypothesis. In

P R E F A C E. v

In treating of this oil, I have sketched out the principal diseases to which it is chiefly adapted. In this I have not advanced any hypothesis, or given any rules of practice but what are deduced from the structure of the parts in the animal œconomy, and confirmed by observations of Doctor *Boerhaave*, his learned commentator, and Doctor *Mead*. Sometimes I have made use of these gentlemen's words, in deducing practical inferences, not knowing where to find better, in order to strengthen, by the authority of such great names, my doctrine concerning this medicine.

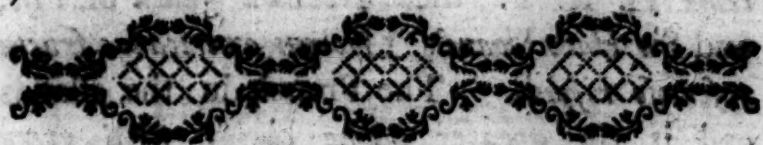
If *this oil* shou'd ever become officinal, (which I doubt not but it will in time) the seeds from which it is extracted, may be easily imported, at a very reasonable rate, as the plant grows wild and
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in great plenty, in every one of the English and French islands. We have the best and most valuable of our medicines in this manner from abroad; such as the *Peruvian bark*, *rhubarb*, *ippecacuana*, &c.

If in writing and compiling this small treatise, I have any ways contributed towards promoting the *ars medendi*, my chief aim is answered.

If there should be any errors in this performance, (as some no doubt there are) I hope the candid reader will make the proper allowances, when he considers, that I may in some respect say with *Lucretius*,

- - - *Peragro loca, nullius ante*
- - - *trita solo.*



A Dissertation, &c.

IT is universally allowed, by all the learned of the profession, that there is nothing more wanted in the art of healing, and particularly in treating all *bilious* cases, than a *vegetable purgative oil*, that will act gently in a small quantity on the bowels, with little or no irritation: these qualities the *oleum ricini*, or *castor oil*, possesses in an eminent degree; and tho' it is little known in Europe, yet it has been used these several years with great success in the English and French islands in America, as will appear from the following observations.

I shall first premise a *botanical* description of the plant; after which, I will treat of its oil in a particular manner.

DESCRIPTION of the PLANT.

The plant from which this oil is extracted is the *ricinus americanus major*, caule vires-

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cente H. R. P. the **Nbambu guacu* of Piso, and Sir Hans Sloane's †*ricinus americanus fructu rasemoso hispido*. The French in the islands call it the greater *palma christi* with green stalks. †*Monsf. du Tertre* and ‖*Pere L'Abbat* mention it under that name in their description of the French Caribbee Islands.

There are four or five sorts of *ricinus*, that grow in different parts of Africa and America, which have much the same virtues; their seeds are frequently sent into England intermixed with each other. There are two sorts that grow in the warm parts of Europe, and are to be met with in Spain and the island of Crete.

Mr. Millar says these plants deserve a place in every curious garden, for the singular beauty of their leaves, especially those sorts that are annual and may be cultivated as all other annual plants. He planted the *ricinus africanus maximus* near Chelsea; one of the leaves of this plant was upwards of two feet diameter, and

* Vide *Gulielm. Pison* hist. natur. Ind. Lib. iv. c. 31.

† Vide history of Jamaica, vol. i. page 126.

‡ Vide *histoire des antilles habitees par les Francois*, vol. vii. page 103.

‖ Vide *nouveau voyage*, vol. vii. page 78.

and the stem was as large as a middle-siz'd broom-staff, tho' but of one summer's growth.

Some imagine the *ricinus* to be the tree that shaded *Jonas* after he was discharged from the whale*. It

* The following anecdote concerning this plant, which is called in Hebrew *KIK*, is recorded in Gerard's herbal, or universal history of plants; printed in the year 1633.—*Ricinus* (whereof mention is made in the fourth chapter and sixth verse of the prophecy of *Jonas*) was called by the Talmudists *kik*, for in the Talmud we read thus, *velo beschemen kik*, that is in English, *and not with the oil of KIK*, which oil is called in the Arabian tongue *alkerva*. Moreover a certain rabbin asks this question, what is *kik*? to which *Resch Lachish* makes answer in Ghemara, saying, *kik* is nothing else but *Jonas his kikajon*; and that this is true, appears from the Greek name *κικ*, which the antient Greek physicians used, which Greek word is deriv'd from the Hebrew *kik*, whereby it appears that the old writers long ago called this plant by its true and proper name, but the old Latin writers knew it by the name of *cucurbita*, which is evidently demonstrated by a history, mentioned by St. Austin to St. Jerome, in these words: "The name *kikajon* is of small moment, yet so small a matter lately caused a great tumult in Africa, for a certain bishop having an occasion to treat of what is mentioned in the fourth chapter of *Jonas's* prophecy, (in a sermon he made in the cathedral church) said that *this plant* was called *cucurbita*, a *gourde*, because it encreased so hugely in so short a time, or, said he, it is called *hedera*: upon the novelty and untruth of this doctrine the people were greatly offended, and there suddenly arose a tumult and hurly-burly, insomuch that the bishop was obliged to go to the Jews to ask their judgment concerning the name of this plant; and when he had received of them the true name, which was *kikajon*, he made an open recantation and confessed his error, and was justly accused as a falsifier of the holy scripture."—Sometimes the Greeks called this plant *ρεοστάν*, (i. e.) *ricinus*, from it's similitude with that insect.

It is called in Latin *ricinus*, because the seed resembles the animal of that name, which commonly infests horses and black cattle, call'd *tick*.

It is likewise called *palma christi*, because the leaves resemble the palm of the hand: It is called by *Dioscorides*, in Greek, *ξιξί ἢ ξρόριον*, *a crotonis sive ricini animalis similitudine quod refert semen*. The French sometimes call this plant the *agnus castus*, perhaps on account of the great efficacy of its oil in curing, and in temperating all *febrile* heats, and especially the heats of *venery*; from whence, as I suppose, the people of St. Christophers, who were formerly blended with the French in that island, have, by a corruption of *agnus castus*, called it *castor oil*.

It is certain this oil was used in St. Kitts before it was in any of our other islands; what is very surprising, there is little or nothing said of its medicinal virtues by the gentlemen of the faculty residing at Barbadoes; and I have met with two or three surgeons from that island, who seemed not to have known the use of it.

This plant grows as tall as a little tree, very beautiful, and expanded into many branches;

ches; the leaves are large, rather round, parted into five, eight, or more sections, and sometimes into nine sharp-pointed or serrated divisions, fashioned like the leaves of a fig-tree, but rather larger, spread or wide open like the hand of a man, and has towards the top a bunch of flowers, clustering together something like a bunch of grapes: these flowers are small and staminous, growing on the top of the stalks; but on the body of the plant grow bunches of rough triangular husks, each containing three speckled seeds, less than horse-beans (tho' sometimes as large); which, in their brittle shells, contain white kernels, of a sweet, oily, and sometimes nauseous taste.*

The *kernel*, from which the oil is extracted, is very acrimonious, and will in some constitutions work upwards and downwards, in a violent manner; it consists of two very thin membranes or pellicles, one exterior, and the other in the heart of the seed; of which if the seed be stripped, 'tis commonly deemed

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* Vide *Gulielm. Pison histor. natural & medic. Indiarum*, p. 180.—The Arabians call this plant *cher-va*, the Italians *cataputia maggiore*, the French *palma christi*, the Germans *wunderbaum*, the Dutch *wonderboome*, the English the *castor*, *palma christi*, or *great spurge*.

less purgative and emetic by half than it was before, insomuch that four grains will then be only equal to two.

The use of these seeds is of very antient date in the practice of physic: the divine *Hippocrates*, some hundred years before the Christian æra, made use of them instead of the *grana cnidia*, and says they were acrimonious, and sometimes very violent in their operation.

It is certain the seeds in substance are acrid, and shou'd not be used but with caution. It is very remarkable, that all the oils obtained by expression, are constantly very mild and lenient, even though the substances from which they are extracted be in themselves very acrimonious. *Mustard-seed*,* which is so acrid that it is even caustic, yields by expression an oil as mild as that of *sweet almonds*; but then the *kernels*, from which the oils are extracted, must not be old, but fresh and ripe, because they become more and more acrid as they grow old, and this acrimony is acquired even in the fruit itself: yet the negroes in the West-Indies, in *venereal* complaints, often take
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* See *Monf. Macquer's elemens de chymic*, p. 97.

one or two seeds of this plant every morning, for ten or twelve days, after which they take two doses of *castor oil*: by which practice alone, they commonly find themselves, without much trouble or pains, cured of the most inveterate *gonorrhæas* and other venereal complaints.

Matthioli, 'tis true, and some antient physicians, attempted to correct the emetic quality of the *seeds* of this plant, by *torrefaction*, but were mistaken; as, on the contrary, they acquired by that means a greater *acrimony*.

Gulielmus Piso has proposed a tincture of them, with brandy, as a very safe medicine: but as the acrimony of this nut is sometimes so great as to become unsafe, I must advise it to be taken with caution.

The *leaves* of the *palma christi* are commonly used abroad, cut in small pieces, boil'd with milk, and made into a *poultice*, which becomes very suppurative, and will bring boils to a head sooner than any *plaister* or *poultice* I know. The leaves are also used very often with success to dress *blisters*, especially if there be any dread of an approaching mortification; they are also of great efficacy steeped in vinegar;

gar; and will cure the *herpes*, the *itch*, and the *scalded head* of children.

Having premised thus much, concerning *this plant* in general, its *fruit*, and *leaves*, I must now return to the *oil*, which has been found so efficacious in all obstinate constipations, and in fine, is a sovereign medicine in all *bilious*, *calculous*, and *nephritic complaints*. And here I appeal to all those gentlemen of the faculty, who have practised abroad in *warm climates*, some of whom are now in England; I likewise appeal to the surgeons of his majesty's navy, who have tryed this oil in the Leeward Islands,—whether they ever found any other than salutary effects from the use of it in almost all cases where there is an indication for opening the body, especially in warm bilious constitutions? 'tis true it does not answer so well in cold phlegmatic habits of body, as it is a cooling purge, and in those persons sometimes apt to cause gripings and spasms. I never knew any medicine answer so well in most affections of the bowels, and especially the *colica pistonum*, commonly called the *dry belly-ache*.

Mr. *Frazer* very well observes, that *Sydenham* and *Baglivi* have both complained in their
trea-

treatises of *bilious cholics* ;* that tho' they preferred mild purgatives in those cases, yet these complaints sometimes were so obstinate, as to require stronger efforts than any of the laxative kind could effect ; and consequently they were obliged, in spite of themselves, to recur to *pil coctia* and other *drastics* : this oil would certainly answer their intentions in every respect.

Tho' it is the most efficacious medicine in removing the most obstinate complaints of the *dry belly-ache*, and the *iliac passion*, (two of the most excruciating disorders that human nature is liable to) yet it is so innocent in its operation, that I have often known it given with success to infants, a tea-spoon-full the day after their birth, in order to lubricate the passages, and expel the *meconium*.

Mr. *Brown*, a gentleman of fortune, of the island of St. Christopher's, often used it instead of olive oil, in his fallad of an evening, it procuring him one or two stools, which he told me was always of great service to him, and kept him cool in the *gout* and *calculus*, both which disorders he had in a violent manner.

This

* See the medical essays of London, vol. 2.

This oil—which we may now call either *oleum ricini*, *oleum palmæ christi*, oil of kik from the Hebrew, *agnus castus*, or *castor oil*—this oil, I say, I have given with success in *dysenteries*, or *bloody fluxes*.

**Boerhaave* observes, that it is sometimes disputed whether mild oils, such as oil of sweet almonds, bind or relax the body; because, if they are taken in a *dysentery* they bind, but in *hypochondriacal affections* relax.—But if we consider, that the cause of a *dysentery* is something acrid, vellicating the fibres of the intestines, and that the property of mild oils consists in obtunding acrids, by sheathing them, we shall easily perceive they must be of service in a *dysentery*; but in *hypochondriacal affections* the passages of the intestines are dry and crisp, and their surfaces unequal and rough; hence mild oils being apply'd to them, take away their crispness and corrugation, by lubricating and then relaxing them.

The use of this lubricating oil is most beneficial to those bodies that are dry, hot, *atrabilious*, troubled with the *piles*, and that enjoy a plentiful perspiration; for these will be purged with oily medicines, when the strongest

• Vide *Boerhaavium de viribus medicamentorum*.

strongest drastics will have no effect: for if we consult all the Italian eminent physicians, who have written on *bilious cholics*, such as *Raglivì*, *Bellini*, &c. they are the most averse, in all these cases, to acrid purges, and only order oil of sweet almonds, and other oily draughts, which immediately perform their effect, whilst *drastics* only cause anxieties, sweats, and vomitings, without any purgation.

I have often found this oil of the greatest efficacy in *clysters*; and in outward application, by only rubbing the navel and hypochondria in children, when I cou'd not get them to take any thing inwardly, which is often the case in infants. this embrocation alone has often produced one or two physical stools.

The *castor oil* given in small draughts, or by way of clyster or embrocation, is an excellent and wonderful *vermifuge*: nay the very smell and fume of this oil will purge some delicate and weak children; the active part of some purges being very volatile: this likewise appears from *aloes*, the fume of which will purge some delicate frames; but when its subtile parts are flown off, that which remains is quite unactive; the cathartic part of a *purge*, according to *Boerhaave's* observations, being the least
with

with regard to the whole bulk: as appears evidently from *euphorbium* and *coloquintida*, which being dissolved in water, and gently evaporated, become unactive masses; whereas the part evaporated was very small, and scarce perceptible.

The Indians in Brasil, I am told, take an orange or lemon, and keep it macerating for a month together in this oil and the *oleum coloquintidos*, mix'd together; and by rubbing it strong in the hands, 'till they become warm, by applying the lemon to the nose, its odour will immediately cause a stool: but this I believe must be meant of the *oleum ricinoides*, or *physic nut*, or rather the *oleum granorum tigli*, which are much stronger than the *oleum palme christi*.

PREPARATION of the OIL.

This oil is prepared in two different manners: first, by decoction, in boiling water; secondly, by expression, which is counted the preferable method, tho' a greater quantity of oil is acquired by the former.

In order to prepare it by decoction, you must gather the seeds when ripe, strip them of their husks,

husks, pound them in a marble mortar, and tie them up in a linen cloth; put this packet into a pan, with seven or eight times as much water, and make the water boil; the oil will be separated by the ebullition, and float on the surface of the water; skim it off carefully with a ladle, and continue boiling 'till no more oil appears.

By this method a much greater quantity of oil will be obtained, than by *expression* alone, because the degree of heat applied greatly facilitates the separation of the oil: for a convincing proof of this truth, take the remains of the seeds, from which the oil has been so thoroughly expressed that they wou'd yield no more, boil them in this manner, and you'll obtain a great deal more oil.

This way of obtaining the *castor oil* is not so much esteemed in general, as that by *expression*; because the heat which the seeds are exposed to in the operation, occasions their being less mild than they naturally are, and more liable to become rancid.

In order to *express* this oil, you must pound in a marble mortar, or grind in a mill, the kernels; tie up this mass, thus pre-

prepared, in a strong, thick, new canvass bag, and put it into a press, between two iron plates; squeeze it strongly, and you'll see the oil run out in streams into the receiving vessel.

It is very remarkable, as I observed before, that oils, thus expressed, let the substances from which they are extracted be ever so acrimonious, are mild and lenient.* Bitter and sweet almonds produce the self-same soft oil; and the *oil of mustard-seed* is equally as mild, tho' the seeds are so acrid as to raise blisters, and are even caustic. † Dr. James, in his new English dispensatory, says, the *oil of mustard*, by expression, is prescribed with success in the severest fits of the *stone*: but *this oil* is more mild, and by no means like *oil of mustard-seed*, which is procured by distillation, and which is extremely acrid and igneous. The expressed oil of the West-India *thistle-seed*, is very lenient and mild; tho' the seeds bruised, and taken a thimble-full, will vomit and purge several times, and are counted abroad, and really are, a specific in *dysenteries*.

Medicines

* See Monf. Macquer's elements of chymistry, p. 97.

† See Dr. James's new dispensatory, p. 443.

Medicines of the *purgative* tribe, are commonly, by the best authors, divided into two classes; the *drastic*, and *eccoprotic*: the former act by a very powerful stimulus, and by greatly irritating the intestinal coats, very often cause such pains as bring on *convulsions*, *diarrhæas*, *dysenteries*, &c. inasmuch that the celebrated *Hoffman** says, they should be discarded the practice of *physic*, except in cases of the utmost necessity, where a mild method stands no chance of succeeding.

There are, properly speaking, two kinds of *eccoprotics*; one of which does not disturb the body in its operation, and expels little or nothing from it; such as all recent oils, freshly extracted from *animals*, and some from *vegetables*, as *olives* and *almonds*. The second class of *eccoprotics* are now called lenitives, and formerly by the ancients *minoratives*; that is, which do not draw out a quantity of the *fæces* to be expelled, at once, but by degrees. To this class, therefore, belong all *medicines* whatever, that are able to stir the villi of the stomach into *excretory motions*: but this ought to be done without much disturbance to the rest of the body;

* See *Hoffman's* dissertatio de purgantibus fortioribus e praxi medica merito ejiciendis.

body ; yet, as *Boerhaave* and his learned commentator observe, it is absolutely necessary that these medicines be thick and something acrid, otherwise they will never become purgative. The *oleum ricini* we are treating of, has both these qualities ; for it lubricates, gently stimulating the *intestines* to perform their offices, and its thickness hinders it often from passing the lacteal vessels : this we see in whey, which by the thinness and lightness of its particles will pass the lacteals ; and, instead of opening the body, will become a *sudorific*, or *diuretic*.

The Use and Dose of this OIL.

I commonly prescribe from two to three or four spoons-full of this oil to adults, in two spoons-full of *pepper-mint* water, or the *tinct. stomachica* of the *London dispensatory*.

Sometimes I make a *potio alba*, by mixing two or three spoons-full with a sufficient quantity of the *yolk of eggs*, to incorporate it thoroughly, and then add two ounces of simple and two or three drachms of compound *pepper-mint* water. To children I order it by way of an *aleosaccharum*, or mixt with *honey*.

Tho'

Tho' this oil will keep a good while ; yet, *like all other oils by expreffion*, it is apt by age and heat to become rancid.

My ingenious friend, Mr. Renaudet, furgeon, at Bristol Hotwells, who has used for feveral years the *caftor oil* with great fuccefs in North-America, and on board his majesty's navy, tells me, that he has often depurated this oil, and prevented its rancidity, by putting a quart of it into about half a gallon of pure cold water, and whipping it as women do *syllabubs*; by which means the falts and groffer feculent matter either fell to the bottom, or were blended in the menftruum, and the oil floated on top, which he carefully fcumm'd off; and repeated the procefs a fecond time, which was well worth his trouble, as he often found by experience. I am likewise told, that a little falt will depurate this oil; which I have not tried.

As I have found this furprifing medicine in a very particular manner ferviceable, and preferable to all other purges, in the following *diforders*; I'll make a fhort abftract of my obfervations in thofe complaints.

1st—In the *colica pictonum*, or dry belly-ache.

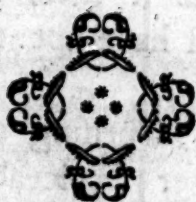
2dly—In most fevers, where there is any indication for cooling and opening the body.

3dly—In all bilious complaints.

4thly—In the *apthæ chronica*, or thrush.

5thly—In the *tetanus*, or cramp.

6thly—In the *gonorrhœa*, *fluor albus*, and some other complaints.



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Of the COLICA PICTONUM,
or DRY BELLY-ACHE.

IT is universally allowed, by all the authors who have wrote on this disorder, particularly the moderns, such as *Huxham*, *de Haen*, *Tronchin*, and *Thierry*, who have given us their practical observations on it, made in very different countries and climates, that whatever the causes of it may be, which they very accurately described, keeping the body open is one of the main indications of cure, in order to give a free passage to the noxious and irritating matter contained in the *intestinal canal*; which alone is the true cause of all the dismal symptoms that attend this dangerous disorder: but then the method for obtaining this end, is attended with great difficulty; sharp, rough drastic purges, are condemn'd by all with great justice, as they add irritation to irritation, and draw the *intestines* into spasmodic contractions, which must necessarily defeat the intention they are given for; as these contractions will stop the natural spiral motion of the *intestines*,

and consequently the expulsion of the irritating cause, with the addition of excruciating pain; which beyond all doubt, will put the patient's life into immediate danger.

Eccoprotics, given in such quantity and form as may seem to answer the intention best, will not frequently stay on the stomach, but be rejected as soon almost as they are given, on account of the great load and quantity of these mild medicines required to be taken, in order to render them *purgative*; by which means the symptoms are again exasperated, and the *vis vitæ* or strength lessen'd; which is a most material consideration, as weakening the powers of nature here, is destroying every salutary intention, because it is by these powers we must expect a recovery, and destroying or lessening them is taking away our bulwark, and foundation of all hopes.

From this consideration it is, that the before-mention'd gentlemen, of distinguish'd abilities in their profession, are so cautious in regard to bleeding in this complaint, and are far from recommending it; so distant is the true genius of this disorder from an *inflammatory disposition*, except such may be brought on by imprudent treatment.

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REMARK *the First.*

In regard to gentle laxatives, all those who have had the *cholic* of *Madrid*, under the care of Doctor *Thierry*, who at that time resided there, not one had so imperfect a recovery, as to be paralytic, or even weak in the limbs after the fit.

Now by taking a view of this gentleman's practice, which he candidly and minutely exhibits for the sake of young practitioners, we find his chiefest stress, in the medicinal treatment of this disorder, and I may say his *sheet-anchor*, to be an openness of body.

REMARK *the Second.*

No *palsy* was the consequence in such a number of afflicted people; therefore no more material indications can occur than that of keeping the body open, especially in the beginning, because fulfilling properly that indication not only removed the complaint, but also prevented the *paralytic indisposition* it generally leaves after it; which all observations confirm.

REMARK *the Third.*

Is it not surprising that Doctor *Thierry*,* who found so much success from *laxatives*, in his practice, should be so fond of overlooking the immediate cause of this disorder in acting on the inward coat of the intestines, introduced there by what we eat, drink, or let down with the saliva, as to establish the different changes in the *air*, such as heat, cold, dryness, moisture, sharp winds, all governed in a great measure by the respective situation of places, as the most general causes of this disorder; alledging the inclemency of the air, the season preceding the memorable *cholic* of *Poitou*, and that the people had incautiously left off the furred linings of their cloaths too soon.

I would willingly ask the doctor, why these changes of the air affected the bowels of such a multitude of people at the same time, and no other part of the body?—surely the lungs lay more particularly exposed to the consequences of such changes, than many other parts; and yet he gives us no account of the then reigning *peripneumonies*, *pleuresies*, *opthalmias*, *catharral fevers*,
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* See les observations de Mons. *Thierry* docteur regent de la faculté de la medecine de Paris, sur la colique de Madrid & ses environs.

senteries, and other *inflammatory complaints*, which are the usual consequences of such changes of the air.

Had the doctor attended to the dissertation on the *cholic* of *Devonshire*, by the deservedly admired Dr. *Huxham* of Plymouth, he would have found the rough, sour, or *unfermented cyder** of that country, to be the cause of that *cholic* he describes ; he would have found that *that* great man, so well acquainted with air, its variations, and effects, never had recourse to it to explain the cause of this *endemic cholic* ; in short, he would have found, that this gentleman (whose treatise on the air, and the disorders mostly depending on its various constitutions, will be a never-failing monument of accuracy and *Hippocratical judgment*, grounded on principles of true theory) knew too well its insufficiency, to establish it as the general cause of *this disease*.

C 4

Never-

* New rum, and a great quantity of fresh and unripe lemon and lime juice, made into punch, seem commonly to be the causes of this disorder in the West-Indies ; as distillers of rum, boilers of sugar, and overseers, are chiefly subject to it : the first, (who are generally of the poorer sort) from immoderately drinking new hot rum ; the second and third, from taking cold after sweating in hot boiling-houses, and drinking very strong punch made with fresh limes and newly-distill'd rum.

Nevertheless, tho' this disorder is not *epidemical*, yet it may sometimes be *endemial*, and proceed from damp weather in rainy seasons; which, stopping the insensible perspiration, may cause all those terrible symptoms attending the *dry belly-ache*: but this is not to be attributed to any deleterious particles in the air causing this disorder.

REMARK the Fourth.

The learned and *methodical* writer on this subject, Dr. *Tronchin*,* has clearly shewn the anatomical distribution of the eight pair of nerves thro' the *intestines*, forming their different *plexus's*, particularly the *plexus mesentericus*, and the communication of these nerves with those parts *paralytically* affected in this disorder; from which the true cause of the *palsy* attending the complaint, and the true method of cure in general, (I mean by an openness of body, supported without irritation) will appear to a conviction. The whole human frame must suffer *convulsive spasms*, whenever the *meseric nervous plexus* is irritated: this is evidently confirmed and demonstrated by *Webfer's* admirable observations concerning the

* His dissertation on the *cholera pictonum*, was lately translated by Dr. Schomberg of Bath.

the *consent of nerves*, and the *convulsions* which infants newly born are subject to, from an acid contained in their stomachs and bowels.

REMARK *the Fifth.*

The learned Dr. *de Haen*,* of Vienna, who has had a very great opportunity of seeing vast numbers labouring under the worse kind of this disorder, confirms the doctrine of *laxatives*: I say the worse kind, because it was the effect of *poisonous effluvia* on the poor working people in the *mines* near Vienna and other parts of Germany. It is true, indeed, he adds greatly to this method of treatment by obtunding the acrimony, and inviscating the *poisonous* and *deleterious* particles with *mucilaginous* and *oily* substances; by which he guards the tender fibres of the stomach and bowels from their *deleterious* influence: a remarkable instance of his preserving the lives of so many *miners*, appears by his recommending that they should eat *fresh lard* and *brown bread* before they went into the *mines*. Since this method has been practised, he says, not one in ten of them is now brought to the hospi-

* Dr. *Anton. de Haen* ratio medendi in nosocomio Vindobonensi in articulo de colica pictonum.

hospitals for cure ; tho' before not one in fifty escaped ; to the great detriment of those concerned in the *mines*, and the public in general ; which, before, were obliged to support so many poor widows and orphans. This physician's doctrine is elegant and sound, his practice bold and masterly, and not to be exceeded by any that ever wrote on this subject.

Whatever is the proximate cause of this terrible disease, Dr. *Tronchin* very well observes, it produces many remote ones, which upon a close attention to the disorder, he reduces to the following.

1st—To the *remains of a fever*, carried off by an *imperfect crisis*, or not well cured.*

2dly—To *Poisons*.

3dly—To the *too free use of wine*, or of *acid austere fermented liquors*, or of *unripe acid fruits*.

4thly—To the *gout* or *rheumatism*.

5thly—To an *obstructed perspiration*.

6thly

* See a treatise on the *colica pictonum*, by Dr. *Tronchin*, and translated by Dr. *Schomberg* ; with notes.

6thly—To the *scurvy*.

7thly—To *melancholy*.

8thly and lastly — To the *passions of the mind*.

Now let the remote causes be what they will, the proximate and primary indication of cure is to open the body first by an emolient *clyster*, with two or three ounces of the *oleum ricini*, or the following, which I commonly use,

R. Decoct. comm. pro clyster, *uncias viii.*

Ol. Ricin. *uncias iii.*

Sapon nigri *unciam fs.*

Vin. Antimonial turb. *dragmas vi.*

Asæfoetid. (v. o. solut) *dragmas iii.*

M. f. Enema statim injiciendum & pro re natâ sing. noctib. repetend.

After which I give a table-spoon-full of the oil, either with *pepper-mint water* or the *tinct. stomachica*, and repeat it every hour, or half hour, occasionally, till it produces a stool, which the fourth spoon-full most frequently effects; that is to say, if it remains upon the stomach; but if the stomach is nauseating, and will not keep it, two ounces of the infusion of
ipeca-

ipecacuabna, drawn from a tea-pot with boiling water, will sufficiently cleanse the stomach; and will act without much straining, and better than the *powder* or *tincture*. After the stomach is thus settled with one or two pukes, the oil will then commonly perform all that can be expected, and ease the patient in three or four hours from the most excruciating pains; nevertheless, sometimes, this sickness of stomach, in spite of all that can be done, is very violent and lasting; in that case I commonly order a neutral saline draught, with simple and compound mint water, in *actu* fermentationis sumendus*; if this does not answer, I repeat the same draught with a small *pill* of one grain and a half of *extractum thebaicum*, to be repeated occasionally with the draught according to the violence of the pains; this seldom fails preparing the stomach for the reception of the oil; which, as I observed before, after the fourth spoon-full will begin to operate, and find a passage; this is by all means to be kept open for some time, for otherwise the belly wou'd be soon bound up again, and most severe griping pains wou'd most certainly soon succeed, on account of

* See Dr. Barry on the three different digestions and discharges of the human body, page 50.

of the sharp humours continually falling on the intestines. This is to be done with the following *potio alba*, composed of a smaller quantity of the *oleum ricini*, and to be repeated every six hours.

R. Aq. Ment. simpl. *sesquiunciam*.

Ol. Ricin. (v. o. solut) *dragmas ii.*

Aq. Ment. spir. *dragmas iii.*

Syr. Alth. *dragmam i.*

M. f. haust 6a. quâq. hora repetend.

In the mean time the following, or the like *anodyne bolus*, is to be freely given, in order to take off the excessive pains, which are vastly apt to return, unless prevented by repeated use of *opium* and *camphire*.*

R. Valerian Sylv. p. *scrupulum i.*

Cast. Russiens. *gr. v.*

Extract Thebaic *gr. i. fyr.*

Er mecon qs. m. f. bolus pro re natâ sumend.

The quantity of the opiate cannot, however, be absolutely ascertained, as some patients can bear much greater doses than others.

To

* As there seems to be here a convulsive constriction chiefly in the ileon, *anodynes* mixt with *anti-hysterics* will always be the likeliest means of relief.

To prevent costiveness, which these opiates are apt to cause, the *clysters* must be occasionally repeated.

If the patient complains of loss of sight, great weakness of the loins, or a tingling uneasy sensation thro' the whole substance of the *medulla spinalis*, I repeat the clyster before described, and order blisters to the *thighs* and *arms*, and *sinapisms* to the soles of the feet, to be renewed every six hours ; and the following or some such volatile liniment.

R. Spir. Volat. Ammon. *unciam* i.

Camph. in f. v. f. *dragmas* iiii.

Liniment vol. *dragmas* vi.

Unq. Nervin *unciam* ss.

Pisselæi Indic.

Ol. Palm. Christ. aa *unciam* i.

Bals. Peruvian *uncias* ii m.

F. Linimentum quo illinatur dorsum & spina dorsalis post frictiones.

At the same time the *Barbadoes tar* is likewise to be taken inwardly, as there is nothing more likely to prevent the *paralysis* so often attending this disorder.

When the body is once open, there is no more danger of any bad symptoms, it must therefore

therefore be kept so by the oil, or sometimes (in order to diversify and please the patient's palate) by the following linctus.

R. Ol: Amygd. d. syr. ros. solut. aa *unciam* i.
Tart. solub. *dragmas* ii.

M. f. Linctus, sum Cochl. i subinde.

During the whole time of the paroxysm, emollient embrocations, consisting of *this oil*, spirits of wine, and *balsam of peru*, must be often repeated, and cloths dipp'd in the same apply'd and bound tightly round the whole abdomen; this will be found of great use, especially if oily draughts and emulsions be constantly and at the same time used, and bladders fill'd with warm water be apply'd occasionally to the abdomen.

After the *cholical* and *rheumatic* pains cease, the patient must be very cautious in regard to his diet; for this complaint is very apt to return by the smallest error in this respect.

For drink, nothing should be given but *Bath* or some proper *chalybeat water*, with now and then two or three spoons-full of some generous wine. Every thing that is *flatulent* and *windy* is hurtful in this disease. Stomachics, and *Huxham's tincture* of the *bark*, will now become very proper: frictions and riding to be absolutely

absolutely insisted on, as the greatest preservatives against relapses. Balsam of Peru, taken from ten to twenty drops every six hours, will here likewise be of excellent service, as also sea voyages.

This is the method I have always found most successful during the paroxysm of this disorder. After the fit is over, then (and not 'till then) the prudent and sagacious physician will have an eye to the remote causes before-mentioned, and investigate every symptom, in order to find out and adapt his cure accordingly, to prevent relapses. After which, *bat-thing*, and drinking the *Bath waters*, with prudence, will be of excellent service: as *bat-thing*, even in the fit and paroxysm of this disorder, has often proved very successful.

I have seen terrible consequences from the bad treatment of this complaint by *medicasters*, and *pretenders* to *physic*; who, sometimes, I have known order hot drastic purges, and even crude mercury in great quantities. These *gentlemen*, who often practice by rote, and play with the lives of mankind, are seriously advised by the learned Dr. *Huxham* to peruse now and then the sixth commandment.

Of

• Quorum stultitia quæstus impudentiæ est: *Phædr.*



OF FEVERS.

SYDENHAM, in writing of *fevers*, says, that disorders in general, and *fevers* in particular, are nothing else but a struggle of nature, endeavouring by all the means in her power to exterminate the morbid matter, for the recovery of the patient: now it is universally allowed, that there is no *fever* cured but by some considerable evacuation, either procured by nature or by art; but of all evacuations and solutions of disorders, the most desirable is, first by sweat, secondly by stool and urine.

Hippocrates, the father of *physic, says, those things that are to be carried off, are to be drawn to the parts they most incline, thro' such ways and places as are fittest for their conveyance and expulsion. If nature is not able to expel the congested humours, then the art of the *physician* is required, to assist her that way

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* Vide *Hippocrat. Aphor. 21.*

by which she inclines to unburthen herself, either by *sweat, stool, or urine*; for every evacuation is not equally suitable to all persons, on account of the difference of constitutions and diseases: tho' we observe *evacuations* thro' all or most of the emunctories, are sometimes necessary, as is experienced in *malignant fevers*.*

Now, when there is an indication for stools, I maintain there is not in the whole *materia medica*, a medicine equal to this *oleum ricini*, both for its opening and cooling qualities. I say in *most fevers*; for I have found, by experience, it will not answer in *low nervous fevers*, even by way of *clyster*, on account, as I imagine, of its *cooling and refrigerating* quality.

As for *ardent and inflammatory fevers and complaints*, I have often seen it succeed when *nitrous medicines* and *James's powders* have failed; giving every other day *two spoons-full* of the *oil*, and the intermediate days three or four spoons-full of the *castor emulsion* every *six hours*: which is made like common *emulsion*, with six or eight almonds and one *castor nut*, stript of its pellicle, and boil'd in a pint of water.— This emulsion is most frequently made use of by

* See Dr. Mead's *monita practica*.

by the French in the islands, tho' it is sometimes apt both to purge and vomit; which I think proves the acrimony of *this nut* to consist entirely in its essential salt, and by no means in its oil. I never knew the oil to vomit, tho' given to four spoons-full; and here an exceeding small quantity of the salt, dissolved in an aqueous *menstruum*, is apt to have from its *acrimony* an *emetic* quality.

I have a servant, who some months ago was taken with the worst symptoms of an *ardent* and *inflammatory fever*, and *sore throat*: there were strong reasons to suspect that this pain in the throat was of a *gouty* nature; for one night he had a pain in his great toe, during which the other greatly abated. As he had been for two or three days without a stool, I gave him two spoons-full of the *oleum ricini*, in a little *pepper-mint water* (as I always have some of this oil by me, myself and family never taking any other purging phytic); this gave him four stools, and the next morning his fever left him; and he had a regular fit of the *gout*, that lasted ten days; which he had not for many years before.

I have even seen cured, the worst of all kinds of fevers, I mean the *bilious yellow fever*

of the West-Indies, by this simple method; first exhibiting an *emetic*, according to the indication, then *this oil* and *emulsion* occasionally; at the same time diluting *acids*, especially in the commencement of the disorder; are of great service, as the blood from the beginning is full of *putrid alkaline** salts.

I don't doubt but the judicious and learned of the profession will approve of this simple method of treating this terrible disorder, when they consider that the chief and principal seat of this fever is in the right *hypocondrium*, where the *liver* and *biliary ducts* are situated, and that the *bile* of all the humours of the human body is the most *putrescent*, and that this degree of *acrimony* is heighten'd by the heat of the climate: thus the *bile*, in this exalted state, gets into the blood, brings the whole mass into a putrid and almost *gangrenous* state; will cause a deep yellowness all over the body, and sometimes lived spots and *mortifications* in various parts. All these complaints arise from the great acrimony of the *bile* in its most exalted state; therefore, the chief indication of cure always appeared to me to consist in evacuating and

* Tho' the *bile* is not absolutely *alkaline*, I think it is allowed that it is *alkalescent*, and of the nature of an *alkali*.

and carrying off the putrid, *bilious humours*, by gentle *vomits*, *laxative purges*, and *antiseptics*, such as all vegetable acids, *nitrous medicines*, and the *decoctum serpentariae*, occasionally.

I have always been of opinion, that the more simple the method of treating *fevers* in general, the more agreeable to the practice of *Hippocrates* and all the antients, who always insisted on the regulation of diet in *fevers*, and expected the greatest part of the cure from a strict observation in this point; the thinnest aliment, such as *ptisan*, with *barley* and *bydromel*, were what they chiefly ordered. And, as Dr. Towne* very well observes, was *Hippocrates* to see some of the modish mixtures and cordials, which are now-a-days prescribed by some in *fevers*, in defiance of all his skill in physic, he would be at a loss to guess at the disorders.

Dr. Sutherland, in his analysis of *Bath* and *Bristol waters*, observes, that the origins of diseases are not so complex as commonly believed; neither is the method of cure. He takes notice that *Boerhaave* (in his *prælectiones academicæ*)

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* See Dr. Towne, on the diseases most frequent in the West-Indies.

ziones) was wont to observe,* there were many who despised the practice of the *antients*, because in diseases differing in their symptoms they apply'd the same or similar remedies: they think themselves well used if they meet with *doctors*, who ransack dispensatories; changing, compounding, and re-compounding, every hour; while far more surely and sooner they empty the pocket than the disease, *dum longe certius crumenam exhaureunt quam morbum*. Let those who despise simplicity of practice, consider how many, and how different diseases, in all ages, and all countries of the world, have been cured by the use of *baths* and *mineral waters*, of all sorts and denominations; and cured too by these waters *alone*, only first preparing the body for the same.

In all *fevers*, especially in *hot climates*, the diet should be cooling and moistening; air should be admitted into the chamber, so as to circulate thro' one or two adjoining apartments; the room sprinkled with vinegar, rose-water, and cooling herbs; the common drink, warm *lemonade*, which has often occasioned a *diaphoresis* when all the unnatural attempts by *alexipbarmicks* and *cordials* have served

* See virtues and analysis of Bath and Bristol waters.

served only to aggravate the heat, and inflame the blood.

Gulielmus Piso, who has written an exceeding good *natural* and *medicinal* history of the West-Indies,* has been profuse in his encomiums upon the virtues of *oranges* and *lemons*, in *intermitting* and *malignant* fevers: he says, “*Peritissimi nonnulli Indiarum orientalium & occidentalium medicastri, præter vulgares illas toto orbi celebratissimas limonum & citreorum vires quas quoque perpetuò commendabiles habent, plus præsidii in duabus his limonum partibus (semine scilicet & medullâ) ponunt contra malignos morbos & pestilentes febres, atque ipsa denique venena, quam in lapide bezoardico & fastidiosa theriacæ compositione.*”

The same author says, “*Ansam mihi suppeditari autumabam aliquid ad artis nostræ incrementum ediscendi, idque aliquoties tentans, non infeliciter processit, in febribus scilicet intermittentibus, circa initium paroxysmi, haustu calido succi limonum cum sacchari & aquæ fontanæ tantillo, semel atque iterum exhibito, exacerbationes vel in totum cessasse, vel saltem indies præter*

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“ ex-

* See *Gulielm. Pison histor. nat. & medic. Indiar.* page 314.

“ expectationem simul cum siti deferbuiffe,
 “ & intra paucos dies plane filuiffe, depre-
 “ hendi, subsequente utique manifesto affectu,
 “ urinæ scilicet, & imprimis sudorum largâ
 “ promotione.”

He also relates a very memorable story from *Atbenæus*; of their sovereign energy in resisting poisons; insomuch that he does not scruple, with several other authors, to give them the general name of *mala medica*.*

Besides the yellow fever already described, there comes very properly under this head, a particular class of fevers so well described by *Heister** in his *compendium medicinæ practicæ*.

These fevers are very common in Europe and the West-Indies, and deserve our attention in this place, as the *castor oil* answers almost every intention of cure in this complaint.

Those that are seized with this fever have commonly the following symptoms: first, *horripilations* at different times; secondly, the *tongue*,

* See Dr. *Towne*, on the diseases most frequent in the West-Indies.

* Vide *Heister* compendium medicinæ practicæ, de febribus acutis stomachicis & intestinalibus.

tongue, teeth, and throat, are filled with a viscid and glutinous pituita; the patient's breath becomes sometimes both offensive to himself and by-standers; thirdly, there is a gentle looseness attending, with a most offensive smell of the excrements, throughout the whole disorder; fourthly, the hypochondria are tense and sometimes painful (no doubt from the great quantity of noxious humours contained in the stomach and intestines); fifthly, frequent frights and terrors in their sleep, sometimes even when awake; this, Heister says, is a certain sign that the cause of this fever is in the intestines; and these fevers Hippocrates calls tritoaphyas or terrificas; sixthly, pains commonly in the head and neck, from spasms; seventhly, the urine, at first like natural urine, (the cause of the disorder being not yet in the blood) in the progress of the disease becomes turbid, and deposes a muddy sediment.

Now, it is universally allowed, that 'tis a very dangerous practice to stop the *looseness* attending this *fever*, as the noxious humours that ought to be evacuated, wou'd by that means be retained; therefore vomits and gentle purgatives will, in this case, answer every intention of cure. Repeated experiments

periments daily convince us thoroughly of the truth and justness of Dr. Sydenham's observation, when he says, "vomitu peracto sæva
 " illa symptomata (nausea v. g & anxietas &
 " jactationes suspiria luctuosa, nigredo linguæ,
 " &c.) quæ & ipsos ægros excruciarunt &
 " astantes perterrificerant, mitigari solent ac
 " solvi. quodque morbi reliquum est, benetol-
 " lerari."—After which puke the *oleum ricini* internally, and by way of clyster, will answer better than any other lenitive purge; as I have found by repeated tryals.

It may, perhaps, here be asked, what this oil can perform better than *manna*, and other *ecoprotics*, which are used in these and similar complaints? to which I answer, first, it will *purge brisker*, without irritation, in a smaller quantity, and is more likely to remain upon the stomach; secondly, it is *more cooling*, and more efficacious in temperating all febrile heats; thirdly, it corrects and obtunds the acrimony of the *bile*, better than any medicine I know; fourthly, it helps to dissolve, (as I imagine, and will endeavour to prove in the chapter on *nephritic complaints*) all *bilious* and *calculous concretions*. I believe, it will never be asserted that *manna* or any other *lenitive*, is possess of all these qualities.

Of

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Of BILIOUS DISORDERS in GENERAL.

IT is not expected that I should here give a treatise of *bilious disorders*, (that itself would require a large volume) but I will endeavour to draw a few practical inferences from the theory and observations of Doctor *Boerhaave*, his learned commentator, and Doctor *Mead*, in order to support some* practical, and *medical* facts and observations which I have made in applying this oil to *bilious* cases.

1st, The *bile*, by its stimulating quality, as it is the most acrimonious of all the animal fluids, it, no doubt, helps to excite the peristaltic motion of the *intestines*, and hereby promotes concoction; and, as it is purgative like *aloes*, which it greatly resembles, it helps the expulsion of the *feces*.

My

* See *Mead monita practica*, page 122.

My Lord Bacon very properly says, that the *bile* is *multarum in corpore functionum* *eos* & *stimulus*, that is, the *bile* is the *whet-stone* and *stimulus* of many functions in the human body.

Its great utility is evinced by the extraordinary apparatus which nature uses for its preparation: we do not find in the whole animal *economy* a structure of parts like the vessels framed by nature for the separating and perfecting this natural *sape*: nature here, and no where else, as *Haller*, *Fleming*, and all *physiologists* agree, fashions and forms a venous system into an arterial one.

This natural *sape* is a mixture of oil, water, and salt, both *volatile* and *fixt*, separated from the blood and the liver for the different uses of animal life; and, as the blood itself is very often vitiated and liable to many changes, no wonder that this fluid, which is separated from it, should be subject to many alterations, and be rendered unfit, very often, to perform it's office.

I shall just touch briefly, in Dr. *Mead*'s own words,* on the ways by which the *bile* may

* See *Mead monita practica articul. de ictero.*

may become vitiated ; after which I will give a hint of the efficacy of this *oleum palma christi*, in mitigating and removing these *bilious* complaints.

I use this gentleman's words, in order to confirm, by so great an authority, this doctrine of *oily* and *emollient* medicines, and especially this of the *oleum ricini*.

This ingenious physician says, in his *præcepta medica*, “ that the *bile* is often rendered
 “ faulty by its lentor and viscosity, and some-
 “ times by its excessive thinness : in the first
 “ case the secretory glands of the *bile* are
 “ obstructed, and the small quantity of what
 “ is secreted, stagnates in the *hepatic ducts* ;
 “ whence the liver grows hard, and under
 “ its tunicle are formed whitish concretions
 “ that resemble hard *sope* ; in the second
 “ place not only the *bile's* viscosity, but
 “ its excessive thinness, is likewise in
 “ fault ; for here the volatile salt, which is
 “ one of the compounding principles of
 “ the *bile*, over-abounds ; whence the *bile* be-
 “ comes too thin, too exalted, hot, and
 “ irritating, to the *intestines* : in the former
 “ case the body is too costive, and the
 “ *foeces*

“ *feces* are hard, and of a clay colour; in
 “ the latter case a *diarrhœa*, attended with a
 “ fever, and thin yellow stools, constantly
 “ tease the patient: persons who spend their
 “ lives in a sedentary manner, without pro-
 “ per exercise, are most liable to that *lentor*
 “ and *viscidit*y of the *bile*, because its oily
 “ part grows too thick and viscid for want of
 “ a due proportion of salt; on the contrary,
 “ those who render their faculties useless by
 “ too high feeding, and drinking spirituous
 “ liquors, are generally most exposed to the
 “ latter, that is, the *bile*’s excessive thin-
 “ ness.”

Here seem two opposite complaints from
 the *bile*, requiring two different methods of
 cure: I have, nevertheless, treated these in-
 dications in the same manner, and have al-
 ways met with success in such treatment.

First, In case of costiveness, with ash-
 coloured and whitish stools, the *oleum ricini*,
 or *castor oil*, was of the greatest service, in
 purging gently the intestines; especially when
 often repeated: after which *nitrous* and
saponaceous medicines came in very *apropos*.
 Lastly I advised the *Bath waters*, which
 perfectly compleated the cure.

When

When the body was loose from the thin, hot, and irritating *bile* in the intestines, I also gave *this oil*, which abtunding and sheathing the acrimony of the salts, was of more service than *rhubarb* and all the class of *anodynes* that could be given; after which the *Bath waters* answered to a miracle.

This is conformable to the *Hippocratic* doctrine, and confirm'd by the most eminent moderns. *Hippocrates*, in his book *de Morbis*, justly observing, that it conduces very much to the relief and safety of feverish patients, and such as abound with bile, to have the bile evacuated in due time by soft purges. For which reason *Hoffman* makes this most excellent remark; that in all fevers, especially *bilious*, a *soluble belly*, whether it is so naturally, or made so by medicines, is a highly lucky and salutary circumstance: when, therefore, the *bile* becomes acrimonious, and lodges in the *prime vie*, it excites horrors, anxieties, and vomitings; and being afterwards received into the blood, is generally thrown off the third day by febrile motion and heat.

Artbritic and *gouty* pains, which, according to *Hoffman* and the antients, draw their origin from a hot cause, are in like manner principally produced

duced by a fault in the *prima via*, arising from a vitiated *bile*, which being conveyed into the blood, proves the cause of all these pains; whilst the caustic salt, with which the *bile* is impregnated, are fixt upon the membranes of the joints; and this is the reason why fits of the gout are for the most part ushered in by pains of the stomach, anxieties, nausea, and loss of appetite. Hence *Hoffman* and Dr. *James* rightly observe, that the person who knows how on these occasions to evacuate the *prima via*, without raising tumultuous commotions in the animal economy, and at the same time to correct the acrimony of the humours, is the likeliest to succeed in removing, or at least in mitigating *arthritic* and *gouty* complaints. This is most wonderfully performed, especially in hot *bilious* constitutions, (which is commonly the case in all *gouty* complaints) by this excellent oil.

It likewise deserves our attention, that periodical and critical *hemorrhages* have commonly their cause in the *prima via*; and the medicines which are best calculated for allaying and restraining the violence of the *flux* and *hemorrhage*, are those that are purgative,

and

and render the *bile* temperate and balsamic; this the *oleum ricini* performs in a wonderful manner.

Therefore, in the *hepatitis* and most *bilious disorders*; (as *Boerhaave* and his learned commentator observe) whenever the bowels begin to send forth a bilious flux before the fourth day, it will be proper to promote that evacuation, according to *Hippocrates's* general rule; not by draughts and strong purgatives, but by mild emollients, such as *this oil*, using at the same time mild *abstersives*, which are able farther to attenuate the matter of the disorder, and render it fluxile; such as fresh whey, made of new milk, in the spring or summer season, while the cattle chearfully feed on the green pasturage; but this will be rendered more efficacious if it be boiled, as the learned *Baron Van Switen** observes, with those herbs the botanists call *planipitalous* and *lactescent*, such as *endive*, *sowthistles*, *succory*, *dandelion*, *viper-grass*, and the common *gramen* officinarum*.

E

This

* Vid. *Boerhaave* aphorism de ictero multiplici & commentar. *Baron Van Switen*.

* Vel ipsi bubulci vim graminis detergentem noscunt, observando enim sterco bubulum notant obstructions & crustas

This noble physician says, that whenever he met with any *icterical* patients in his practice, he always remembered the advice given him by his excellent master *Boerhaave*, to think the cause of these complaints might possibly be *calculi* in the *gall bladder*; and to this scope he always directed his curative indications, commonly with success; he says he made many trials in order to find out a menstruum that wou'd dissolve and expel these concretions; but hitherto has never been happy enough to accomplish his end.

I think, with all due deference to this great man's opinion, that saponaceous medicines, and the fresh juice of these plants mentioned above, wou'd answer the first indication of dissolving; and *this oil* I am sure will gently, and without irritation, expel those matters that are dissolved, by gentle stools; for *Glisson's* observations, as well as daily experience, convince us that those concretions found in the livers of stall-fed cattle, are fused by the vernal juice of grass, and are carried off by a supervening diarrhoea.

I found

crustas pene lapideas, cum stercore excretas, dum recentia gramina carpunt boves; qui in stabulis detenti, diu languidi fuerunt admodum & icterici prorsus.—Vide Huxham de aere & morbis epidemicis, vol ii. page 170.

I find it more difficult to contract than to enlarge this chapter, as there offers so ample a field in treating of *bilious disorders*: I'll therefore end with the words of the excellent *Hoffman*; who well observes, that, as the *bile* when in its natural state, both as to quantity and quality, may be considered as a medicine of the highest use and importance to the body, so likewise, when vitiated, it becomes a poison; and consequently, that the health of man may be either preserved or destroyed by the *bile*; and that for this reason, in accounting for the symptoms of most diseases, in taking our indications and prescribing the means of relief, we are in a particular manner to advert to the state and condition of this humour, and carefully observe, whether it is faulty, either with regard to its quantity, quality, and the degree of its motions; for certainly many medicines, which are very efficacious in the cure of diseases, operate no otherwise than by increasing the quantity of *bile*, when deficient; *evacuating* it, when redundant and superfluous; correcting it, when vitiated; and preserving its motion to the intestines, in its due and proper state: for few medicines act

E 2

directly

* See *Hoffman* de morbis a *bile* oriundis.

directly and immediately upon the blood and humours, but most of them exert their virtues and efficacy upon the *primæ viæ*; where, in a secondary manner, they correct the vicious humours (of which the *bile* is the principal) which are the direct and formal causes of diseases.

This observation holds good in regard to *emetics* and *laxatives*: it will always hold in a particular manner in regard to a *vegetable purgative oil*, such as the *oleum ricini*, which operates on the bowels with little or no irritation, and will always in a most efficacious manner obtund and correct the acrimony of the *bile*, and at the same time cool the fever that is produced from the same cause.

I will venture to affirm that there is not in the whole materia medica, a medicine like this *oleum ricini*; which, at the same time, possesses in so eminent a degree these three qualities, of *cooling*, *purging*, and *correcting* the *acrimony* of the *bile*.



Of the APHTHÆ, THRUSH, or SORE MOUTH.

THIS is a *new* disorder, and has never been known 'till within these few years abroad : it is *endemic* in warm climates, and seldom or never seen in cold countries, but when brought thither by the patient.

All the *aphthæ* we see in Europe are acute disorders, commonly attended with a fever : this is entirely *chronical*, and will continue months, sometimes a year or two, without destroying the patient.

Dr. *Hillary*, of Barbadoes, has lately written a very ample and accurate history of this terrible complaint :* but I am sorry I cannot agree entirely with this gentleman in his treatment of this disorder ; for I am sure *antimonials* in general, which he prescribes, can ne-

E 3

ver

* See Dr. *Hillary*, on the disorders of Barbadoes.

ver be of service when there is such an acrimony of the *lymph*.

I know that a dose of this *oleum palma christi*, administered in the beginning of this distemper, will prevent the *apthæ*; because, by this means, those viscidities, which stuck in the ducts, and afterwards cause the *sores mouth*, are entirely carried off.

The following are the symptoms that commonly attend this disease.

* 1st—A burning heat in the upper part of the *æsophagus*, something like a *cardialgia*.

2dly—This heat gradually encreases, without the patient's being able to attribute it to any cause whatever; either of intemperance, or irregularity in his way of living.

3dly—After this burning heat, little pimples or ulcers, with an acrid *lymph*, begin at the gums, and spread to the palate and over the mouth, and descend even to the *uvula* and *fauces*; the inside of the lips, and the whole mouth, appear hot and reddish, and resemble very much the zigzag of lightning.

4thly

* As Doctor *Hillary* has so well described this disorder, I have taken some part of the history from him.

4thly—After this, a crust or thin pellicle falls off from these little ulcers, which renders the whole mouth so raw, as not to admit any thing but the softest and smoothest decoctions. Sometimes a salivation will ensue; which seldom or never proves critical; on the contrary it often sinks the patient.

5thly—The patient will continue in this manner some days, and then these pimples and pustules will disappear; he thinking himself pretty well, at least much better.

6thly—A little time after he will be taken with all the symptoms of a *diarrhoea*, the vomiting of an acrid *lymph*, which becomes very hot: this diarrhoea will continue some time; after which, the same matter and the same complaints will return to the bowels; and thus a continual translation of this peccant matter, and a *metastasis* of this acrid humour through the whole intestinal tube, will be continually forming during the whole course of the disorder: from hence these ulcers or pustules fall down from the *primæ viæ* to the *anus*.

Sometimes a troublesome and fatal *hiccough* will attend the last stages of this dis-

order ; because, in this case, the stomach is covered with an *apthose* crust ; which falling off, the extremities of the nerves are left bare, and are consequently easily irritated to convulsions, and liable to inflammation and gangrene.

The excoriation and soreness of the mouth, tongue, gula, stomach, and the whole intestinal tube, plainly shew that the cause of this disorder is an *acid lymph*, turn'd upon those parts, and producing those effects above-mentioned.

The coldness, dryness, and roughness of the patient's skin, which usually attend this disease, demonstrate an obstruction and great want of perspiration and sweat, which in warm climates is or shou'd be very great in a state of health.

In fine, obstruction and acrimony of the humours, arising from thence, seem to be the immediate causes of this disorder ; consequently the indications of cure are, to cleanse the *primæ viæ*, to correct the acrimony of the humours, and promote perspiration.

First,

First, as there is an afflux of humours to the stomach and bowels, attended with a sickness, reaching, and sometimes vomiting, an *emetic* is clearly indicated; I accordingly commence the cure with fifteen grains of *ipe-cacua* in substance, exhibiting at night a *diaphoretic anodyne*; this will carry off the acrid phlegm, with which the stomach and bowels are generally loaded.

The next day the second indication of cure, viz. cleansing and correcting at the same time the acrimony of the humours, will be best performed by a full dose of *castor oil*; this by cleansing the bowels of their foulness, will contribute to render *diaphoretics*, and other medicines indicated, much more effectual. This is to be repeated occasionally in smaller doses, according as the physician shall see it necessary: after this the workings and efforts of nature in this disorder, ought by no means to be disturbed by two frequent purges, since the end in general is better answered by gentle diaphoretics and temperating emulsions, prepared with almonds and a small quantity of the poppy-seeds.

Rive-

* See Dr. Hillary, on the disorders of Barbadoes.

Riverius recommends *narcotics* in the cure of the worst and most dangerous *apthæ*; because they not only ease pain, but prevent a fluctuation of humours to the parts affected.—Therefore, after thus cleansing the *primæ viæ*, I commonly order the following *bolus* and *mixture*, to be repeated every six hours.

R. Theriac Androm. *scrupulum* i.

Pulv. Rhei. *gr.* iv.

Rad. Ipecacuah. *gr.* ii.

Syr. e Mecon. *q. f.*

M. f. Bol. sextâ quâg horâ sumend. superbibend.
cochl. iii. feg. mist.

R. Aq. Menth simpl. *uncias* vi.

Confect. Raleigh *dragm.* ii.

Aq. Menth Spir. *uncias* ii.

Ol. Palm. Christ. (v. o. sol.) *dragm.* iii.

Magnes alb. Syr. Papaver albi aa *unciam* ss.

F. Mistura.

The patient should, during the whole cure, take every morning and evening a pint of warm milk, in which an ounce of mutton suet was melted; this will perform miracles in this case, as well as in *dysenteries*.

In the above prescription, the *oleum palma christi*, and *magnesia alba*, will correct and obtund the acrimony of the humours; whilst the *theriaca andromachi*, and *ipsecacubna*, will promote perspiration, and prove, as Dr. *Akenfide* observes, an excellent *antispasmodic*.

Whenever the patient complains of pains in the shoulders or feet, which is often the case, I have always found a *perpetual blister*, apply'd to the part affected, of excellent service; I have likewise, even when the patient has not complained of those pains, apply'd a perpetual blister to the back, by way of revulsion.

Mr. *Renaudet*, whom I mentioned before, in one of his letters to me, says, “ that he often experienced the good effects of *perpetual blisters*, dressed with the following ointment, “ in that terrible disease of the West-Indies, “ called the *thrush*, which is most common to “ the inhabitants of Barbadoes, viz.

R. Cantharid. opt. contus. *unciam i.*

Coque in Aq. Fonton. lib. ss. ad *uncias iv.*

M. cum unq. basilic flav. *uncias iv.*

Coq. lento igne ad liquoris consumptionem.

This

“ This is the most excellent *ung. epispasticum*
 “ in this case that was ever made use of ; it
 “ acts with so small a degree of irritation, that
 “ the patient is not sensible of any pain or in-
 “ convenience from it ; the salts of the flies
 “ being probably more intimately engaged by
 “ the unctuous part of the *basilicon*, guards them
 “ from stimulating the urinary passages, so as
 “ never to occasion a stranguary, which too of-
 “ ten is brought on by all other forms that have
 “ yet been try’d : besides, this ointment not be-
 “ ing loaded with the filaments and substance
 “ of the flies, the opening is kept much clearer
 “ and free from those sloughs and foulness that
 “ are with the utmost difficulty prevented by
 “ the use of the *unguentum epispast.* of the dif-
 “ ferent dispensatories.”

Whether the cause of this disorder, I have
 now described, be similar in every respect
 to the cause of a *rheumatism*, I will not pre-
 tend to determine ; but have lately read
 with pleasure an elegant Latin treatise on the
dysentery, written by Dr. *Akenfide*,* who great-
 ly insists on the close affinity of a *dysentery* and
rheumatism, insomuch that he generally sup-
 posed them to have one common cause ; and
 some-

* Vide de dysenteria commentar, authore Marco Akenfide.

sometimes does not scruple to call the former a *rheumatism of the bowels*, in the following terms :—“ Denique hanc morborum similitudinem toties jam observavi & perspexi, ut dysenteriam jamdudum pro rheumatismo intestinorum habeam—nos vero id vocabulum a doloribus artuum et musculorum ad intestina transferendo similem plane utriusque morbi causam & materiam esse contendimus.”

This I must observe, that I have always found a great similitude between the *aphæ* above described, and *dysenteries*, in warm climates: they both continue very long, with little or no fever; are both chronical disorders; having seen patients continue months together under each complaint; they both appear to have their translations and metastases from the bowels to the joints, and *visa versa*; gripings, and frequent stools, are common to both; the cause in one seems to be an acrid *mucus*, corroding the intestines; in the other an acrid *lymph*, or sharp humour, turned upon those parts.

In regard to the method of cure, I have for these four years past treated this *sore mouth*, or *aphæ*, with success, in much the same

same manner as I find Dr. *Akenfide* has treated *dysenteries*; that is to say, in giving *ipecacuabna* in very small quantities; sometimes with, and sometimes without *diaphoretic anodynes*; with this difference, that I never omit the *oleum palma christi*; especially at the beginning of the disorder. This medicine I infinitely prefer to *rhubarb* in the first stages of the *aphthæ*, notwithstanding the extraordinary recommendation of it by some eminent modern physicians.

Dr. *Akenfide*, who treats elegantly of the *rationale* of the salutary actions and effects of *ipecacuabna* in *dysenteries*, resolves the whole virtue of this root, into its *aperient* power of keeping the body open, and its faculty of relaxing the coats of the intestines, and, in fine, mitigating the *tormina* or *gripes*.

I woud willingly ask this question: which of these two medicines, the *ipecacuabna*, or the *castor oil*, is most likely to possess these *aperient* powers of keeping the body open, of relaxing the coats of the intestines, and of abating the violence of the *gripes*? If the *ipecacuabna* be supposed, by the doctor, to possess such an *anodyne* and *antispasmodic* virtue, as cannot be expected from opiates in this

this disorder, what are we not to expect from the *oleum ricini*, which possesses all those powers and virtues, above described by the doctor, in a most eminent degree?

Notwithstanding these heroic medicines; the *oleum ricini*, *ipecacuanha*, and *rhubarb*, the *apthæ cronica* are often so obstinate, the small pustules and ulcers are so foul, that sometimes we have been obliged to recur to sorrel whey, vinegar whey, and other acids; which have been of service, when all other means have proved ineffectual, in order to deterge and cleanse the said ulcers. This method (however strange it may appear to some) has frequently been of service when every thing else was of no signification.

The rationale of this method of cure seems confirmed by what my learned and ingenious friend, Dr. Sarsfield, of Cork, tells me. This gentleman, who has often had opportunities of seeing in practice the worse kinds of *apthæ*, assures me, that he has often used the following topical composition with success; and where he could touch the *apthæ* with the same, it was almost infallible.

R. Mell.

R. Mell. Rosar. *uncias* ii.

Borac. *dragma* iii.

Sp. Vitriol *dragmas* ii.

Now, I am apt to think, that if small quantities of this composition were well diluted and conveyed to the stomach and intestines, it wou'd in every respect answer, and be, at least, as efficacious as *Jorrel* and *vinegar whey*, which has been so often of service in the last stages of this disorder.

I have likewise used the following medicines in the *apthæ* and *dysenteries*, occasionally, and *pro re natâ*, as specifics.

A strong *decoction* of the *simaruba*, given in small quantities, and often, in both disorders promiscuously; the *decoctum arabicum*; the wax emulsion; warm milk punch; common punch, or toddy, in which a hot poker has been quenched. Which shews the great analogy there subsists between these two complaints.

The cortex of the bastard *locus*, and the mistletoe of the lemon-tree, are both excellent medicines at the end of a *dysentery*; after having occasionally used the *ippecacuahna* and *castor oil*.

Bathing

Bathing in *Bath waters*, with prudence, is a powerful remedy in the *aphthæ chronica* of the West-Indies; it will greatly increase perspiration, and at the same time strengthen the solids. We daily see **palsies* cured at Bath by *bathing*; which, in a surprising manner, will corroborate in relaxations, and relax in contractions. It is therefore surprising that the celebrated Dr. *Mead* should decry the use of *Bath waters*, and *bathing*, in *paralytic cases* in general; since we have the united testimonies of most writers, in different countries, who have written on warm waters and bathing, to vouch for their powerful effects in these cases: *sed quandoq; bonus domitat Homerus.*

The patient, in the *aphthæ chronica*, when he finds himself recovering, shou'd by all means be careful of his *diet*, as the least error in this regard will bring on relapses. Riding should, at this time, be insisted on; he shou'd now take a *horse* for his *physician*, and an *ass* for his *apothecary*. — *viresque acquirat eundo.*†

F Of

* See Dr. Ritty on mineral waters.

† *Huxham.*

Of the CRAMP, or the
TETANUS.

THE *tetanus*, is a continual and involuntary contraction of all, or most of the muscles of the human body, and rigidity without relaxation. When the body was bowed down forward, the Greeks called it an *emphrosthotonos*; when it was bended backwards, it was called *opbisthotonos*; when the body was fixt in a rigid erect posture like a statue, it was called *tetanus*; very often, when only one limb was stiff, in this manner, it was likewise called *tetanus*.

In the *tetanus* the anterior and posterior muscles are equally contracted; the spasm or convulsion is felt commonly as it were tending from the *sternum* to the *vertebræ*; most acute pains during these spasms all along the spine of the back; with a contraction and stiffness of the dorsal muscles. The patient complains of a tenseness about the *præcordia*, a
stiffness

stiffness and locking up of the jaws ; the face becomes red ; the eyes look stern ; and, as the disease advances, these strong convulsive spasms become more frequent, and more violent. The poor patient is now in a most distressed condition, dreading every quarter of an hour a return of these symptoms ; the pulse is very often præternaturally slow ; the blood is so far from being sily, that its particles don't cohere as much as they do in the natural state ; the body is commonly constipated ; often an intermission in the pulse ; sometimes the body is covered with sweats, from the violence of the agonies, yet no feverish heat attends ; the exterior and interior senses all the while remain whole and entire.

This is a short, but true description of this terrible disorder ; which is *endemic* in very hot climates, but especially in rainy weather succeeding great heats.

If this disorder proceeds from a *wound*, it is seldom or never cured. According to *Hippocrates*,—*convulsio vulnerei superveniens letalis* : tho' I have seen one cured, and two others much mitigated in their symptoms, by first dividing the nerve above the wounds, then

dress'ing it with a digestive with opium : after which I commonly treated it in the following manner ; as I did all other *cramps*, from whatever causes they proceeded.

First, in order to relax the rigid contraction of the nerves, I fomented the præcordia, jaws, neck, and spine, with warm *castor oil*, with (and sometimes without) Barbadoes tar : I then gave two or three spoons-full of the *oil*, with a clyster of the same ; still repeating every three or four hours emollient fomentations, and anointing the parts affected as above. After which I had recourse to musk and opium boldly, without any fear, according as the symptoms were more or less violent ; so as to give ten or twelve grains of *extractum thebaicum* in twenty hours.

To prevent costiveness, which this quantity of opiates might occasion, emollient relaxing clysters, with the *oil of palma christi*, are to be repeated every day.

After the cure, the bark, and *anti-epileptics*, are to be insisted upon for some time ; in order to strengthen the parts so much weaken'd by this disorder.

This

This method sometimes succeeded, but oftener failed; as indeed all methods hitherto found out to conquer this most terrible disorder: but as *cramps* in general fall under this head, I don't doubt but it will be agreeable to my readers to see the following letter, concerning the effect of *tar-water* in this disorder, which I received very lately from Col. *Martin* of Antigua. This ingenious gentleman has favoured the public with several curious and philosophical remarks on West-Indian husbandry; and, without being a physician, has a general tincture of medical knowledge.

“ S I R,

“ The variety of cures made by *tar-water*
 “ I have often seen in many printed cases, as
 “ being very effectual in pains of the stomach,
 “ by indigestion, flatulencies, &c. but I
 “ don't remember it recommended as a
 “ cure for the *cramp*, for which I esteem it
 “ a specific.

“ I discovered this virtue by accident, thus:
 “ my wife in her last pregnancy was frequently
 “ afflicted with the cramp in all her limbs;
 “ at length she was taken suddenly, in the
 “ night, with a cramp in her bowels, to such

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 “ night, with a *cramp* in her bowels, to such

“ a degree, that I thought her expiring; I
 “ started out of bed much frighten’d, and
 “ not having laudanum or any other medicine
 “ at hand, I poured some *tar-water* out of
 “ a bottle upon the table, into a silver pana-
 “ kin, (all which I commonly kept on the
 “ table with a wine glass to wash the mouth)
 “ and immediately warming the same over a
 “ candle, I gave it to the patient, who was
 “ instantly at present ease, and continued so
 “ all night.

“ This induced her to drink a wine glass
 “ of *tar-water* every night going to bed,
 “ and then she had not the *cramp*; but as
 “ soon as she neglected to take the *tar-water*,
 “ the *cramp* returned, and was constantly
 “ and instantly cured by the same
 “ remedy.

“ This gave me so high an opinion of its
 “ efficacy, that I put a woman of forty
 “ years old, into a course of *tar-water*, for
 “ five or six weeks; which entirely cured her
 “ of a most dreadful *cramp*, which had
 “ afflicted her for several years, and for a
 “ week together had her limbs drawn up and
 “ convulsed by the *cramp*, under the most
 “ excruciating pains; but that course of
 “ warm

“ warm *tar-water*, taken by half a pint
 “ morning and evening, cured her so ef-
 “ fectually, that for five years she never had
 “ a fit of it.

“ My method of making *tar-water* is
 “ this:—

“ Take a pint of the best *Norway tar*;
 “ put it into six quarts of soft water, in an
 “ unglazed earthen vessel, stir it well together,
 “ let it stand twenty-four hours, then draw
 “ it off clear from the sediment at the bot-
 “ tom, and from the oil on the surface. If
 “ an hole be drilled within two inches of the
 “ bottom of the vessel, it may be drawn off
 “ the easier, and bottled for use: it will keep
 “ thus for any time, and be less distasteful;
 “ but by washing the mouth morning and
 “ evening, the palate will be soon reconciled
 “ to the taste of the *tar-water*, and 'tis
 “ moreover thought a good antiscorbutic for
 “ the gums.”

O F

CALCULOUS COMPLAINTS.

I THINK it is universally allowed, that whatever is the cause of *nephritic* complaints, (whether the stone, or any other cause of inflammation) it is absolutely necessary, after bleeding, to recommend such things as are emollient and lubricating, inwardly taken, and externally applied; for it is from this method only that one can safely prevent the inflammation in those parts that are injured by a stone; or even remove the inflammation when it is once formed, and relax the passages by which the *calculus* must pass from the kidneys to the bladder: but the *oleum palmæ christi*, which I have been endeavouring to recommend, conduces in a most particular manner to this effect; and is therefore extremely useful for the cure of a gravelly nephritis; insomuch, that in these complaints I never saw any medicine answer so surprisngly.

The

The *calculus* consists commonly of a nucleus, and concentric tunics and crusts; treated in a chymical manner, it resolves itself into air, phlegm, volatile urinous salt, an oil, and *caput mortuum*.

Helmont, *Dr. Hales*, and *Dr. Mead*, were of opinion, that the matter of the *calculus* was a certain tartar, formed in the kidneys by a præternatural coagulation; and the proximate cause of this disease is tartarous salts convey'd out of the blood into the small ducts of the kidneys. Therefore, to prevent those salts from shooting in chrystals, lixivial salts, or the lees of sope, seem to be extremely proper: next, to keep the chrystals from coalescing into a *calculous* substance, oily medicines, and in a particular manner the *castor oil*, must be very efficacious. And this rule, the ingenious *Dr. Mead* says, ought always to take place, with regard to diet as well as medicine.

Therefore, the *stone* is to be treated in a quite different manner during the fit, and out of it. During the paroxysm, the inflammation is to be taken off the parts by bleeding, emollient and turpentine clysters, with *castor oil*; the same oil taken by way of purge, with warm baths; and, when the inflammation

tion is taken off, opiates, and emollient oily decoctions. After the paroxysm is over, then (and not 'till then) we must recur to lithon- triptics and diuretics: which must be used with the utmost caution; for a stone is never forced out when the patient is in great torture; tho' when the pain ceases, it sometimes comes away unexpectedly, and almost of its own accord, with the urine. On the contrary, sharp diuretics do mischief; as they increase the fever, and the present inflammation, while they give a greater acrimony to the urine; from all which the painful parts are more irritated, and the several symptoms increased.

When there remains no inflammation or pain, we may safely recur to small quantities of the *lixivium saponaceum*, diluted in ale or veal broth. This medicine, and the *castor oil* blended, I have known relieve, and often cure, many *calculous* complaints.

I do not pretend to say (tho' there is great reason to suspect) that the sope lees is Dr. *Cbittick's* medicine; but this I will venture to affirm, that it never performed any cure but what the *castor oil* in the fit, and the *lixivium* out of it, has executed, and will execute.

I com-

I commonly, out of the paroxysm, give twice a week two or three spoons-full of the *oil*; and the intermediate days begin with ten drops of the *lixivium*, in a pint of ale or veal broth. I often give, instead of it, the *aq. calcis* which is an excellent medicine, especially the oyster and cockle-shell lime-water, which possesses a much greater power of dissolving the *calculous*, than that of stone lime.

Here I cannot help recommending the use of lime-water, to prevent miscarriages of women. Col. *Martin*, (whom I mentioned before) writes me, that he had try'd the experiment on a lady who had miscarried often, and it succeeded so well, that it not only saved the child of which she was then pregnant, but she afterwards became mother of another; and she is now going on to furnish her husband's table with more olive branches.

That *this oil* alone will dissolve *calculous* and *bilious concretions*, I do not pretend positively to affirm; but am really of opinion, that it has some lithontriptic quality, and will greatly help towards dissolving those concretions:—which I think will appear from the following observations,

1st—As I have been subject to gravelly complaints, I have often taken this oil; and I can affirm, that I never used it but there always succeeded, more or less, a discharge of fabulous matter.

2dly—Tho' the grosser parts of this medicine, as I said before, on account of its thickness, will not pass the lacteals, yet its most subtile and active parts may; which I think is evident from its colour and smell, which I have observed to have been sometimes communicated to the urine.

3dly—Three spoons-full of this oil will commonly give me (who am hale and strong) seven or eight gentle stools; yet, twice or thrice within these two years, I have found that the same quantity of this medicine purged me but once, the rest having passed off in a great discharge of urine.

4thly—I have observed, that in those islands where this oil is commonly used, the inhabitants in general are not so subject to *calculous* complaints, as in other parts.

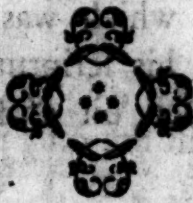
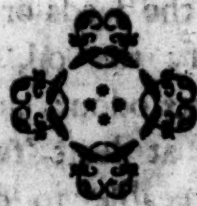
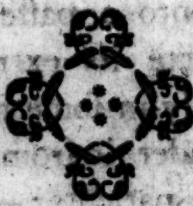
5thly—Since I have used this oil myself, (of which I commonly take a dose once in

two months, without any other physic) I find myself entirely freed from the *stone*; tho' after every dose of this medicine, (as I observed before) I still find a discharge of *gravel*, but without any pain or molestation.

It is very remarkable, that there are some patients who don't dislike the taste of *this oil*; while others think the smell and taste very disagreeable. For the sake of the latter, a few drops of the oil of roses, or a few spoonsfull of rose-water, may be added, in the beating up the seeds or nuts into a paste: this will rarify the oil, facilitate its extraction, add to its odour, and rectify in some manner its taste; at least 'twill hinder it from being so disagreeable to delicate patients:—a secret not known, or at least not used by every artist; and which was first hinted by Dr. *Westmacott*, in his scripture herbal, in the use of the expressed oil of sweet and bitter almonds.

I can't dismiss this subject of the *calculus*, without acquainting my West-India readers, that they have, besides *this oil*, an excellent medicine for all *gravelly* complaints, called
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in those parts the *bottle-cod root*: the botanical name I don't know; but take it to be a species of the *raphanus*, or *raphanoides*. This root has all the pungency of the *raphanus*, or *horse-radish*, and at the same time all the mucilaginous property of the *marsh-mallow*.





Of the FLUOR ALBUS, GONORRHOEA, &c.

IN regard to the *fluor albus*, the principal intention of cure ought to be directed towards mending the habit of body, from some fault from which it may derive its origin.

* Wherefore, generally speaking, it will be proper to begin the cure, as most authors agree, by giving a vomit, especially with *ipecacuabna* wine.

Frequent purging is indicated, chiefly with *this oil*; which will not only purge, but mend the habit of body. As it will prove an excellent balsamic, it may be taken with the addition of aromatics; and in some cases of a little calomel now and then: after which the laxity of the fibres requires astringents, particularly

¹ See *Meae de Fluor albo.*

ticularly such as have the *cortex peruvianus* and steel in their composition.

Moreover, it is to be observed in this place, (which Dr. *Boerhaave** more than once takes notice of) that women of a *spare* and *lean* habit of body, who are apt to be costive, especially after delivery, often become languid and melancholy, labouring under a most obstinate and miserable *obstruction*, from an *indurated* matter in the *colon*; and this hardness in that place is sufficiently evident to the *touch*; and by the unskilful is sometimes taken for the *placenta*, and sometimes for the *spleen*; when in reality it is only the *obstructed* matter stopping in the large intestines; whence it cannot be removed by any medicines except *eccoprotics*; for if stronger purges are given to women in this case, dreadful symptoms are immediately excited, as *vomitings*, *cholics*, and *hysterics*: wherefore, at that time a spoon-full of *this oil* is to be taken; and three or four spoons-full thrown up in form of a clyster, to remove and expel the infarction.

This oil is likewise of service to some artificers: as also to all studious persons; whose abdo-

* See *Boerhaave* de viribus medicamentorum.

abdomen is usually much and frequently compressed: because, whilst they are intent on their studies, they generally sit with their bodies bent, and so compress the contents of the abdomen.*

In regard to *gonorrhoeas*, the *oleum palmae christi*, in every stage of this disorder, is an excellent medicine. 1st, as a cooling purge; 2dly, as a balsamic, and vulnerary; 3dly, it answers in the same manner as *balsam capivi*, which it very much resembles in its effects.

In the *Influenza*, that was epidemical in the year 1762, *this medicine*, taken twice a week, with sufficient diluting, was of excellent service. It was necessary sometimes to take at night six grains of the *pil e syracc*.

And in all pectoral and consumptive cases this is the best and softest purge, taking at the same time an infusion or decoction of the wild liquorish or bead-vine, sweeten'd with the syrop of calabash.

We have nothing in Europe to be compared to this last medicine in consumptive cases. I have been lately told, it is now in

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* Vide *Ramazzini de morbis artificum*.—See, also, Dr. Cheyne's treatise of health and long life, page 221.

great vogue in some parts of France; but I cannot conceive how it is brought from abroad without spoiling.

This oil not only acts on the *prima via* as a purging medicine; but, given in small doses, and assisted by proper diluents, will become aperient and deobstruent; and be render'd either sudorific or diuretic; as I have found by repeated tryals. Hence its usefulness in several *chronic* diseases is evident.

In fine, the *castor oil* is an excellent purge in most *gouty* complaints; tho' we are sometimes obliged to recur to warmer physic in this disorder. It has also been used *externally*, in *dropical* cases, with success. For it has been lately found, that after premising a few draughts, especially the *elaterium*, this oil being well rubbed over the whole abdomen, has occasioned a great and sudden discharge of urine.

This method of friction with oil is not a new practice, but was often used by *Aetius*: and *Celsus* takes notice of the same, in his cure of a *dropsy*, in the following words:—*Utendum fricatione, madefactis tantum manibus aqua, cul sal et nitrum & olei paucum sit adjectum, sic ut pueriles aut muliebres manus adhibeantur, quo mollior eorum tactus sit.*

After

After all I have said concerning this medicine, I wou'd not be understood to mean, that it shou'd be looked upon as a *catholicon*: with the excellent *Boerhaave*,—*nullum ego cognosco remedium, nisi quod tempestivo usu fiat tale*. —I know of no remedy in physic, but what becomes such by due application. This, like all others, will be excellent or otherwise, according as it is well or ill apply'd. Nor will it agree with all constitutions: persons afflicted with bilious disorders, acute fevers, inflammatory diseases, and all those of warm, bilious constitutions, will find great benefit from the use of it. On the contrary, persons afflicted with cold disorders, cachexia, leucophlegmatia, and dropical complaints, and all those of a cold, phlegmatic habit of body, should by all means refrain from the use of it; as it is apt, in those disorders and constitutions, to cause spasms and sometimes convulsions.

As we are in all likelihood indebted to the *American Indians* for *this medicine*, as well as for the *bark*, *ipecacuabna*, and several others; I think there will be no impropriety in finishing this treatise with a short account of the practice of physic at the court of *Montezuma*, emperor of Mexico; chiefly taken from the conquest of

Mexico, by *Antonio de Solis*,* secretary and historiographer to his catholic majesty: to which I will add two or three observations from the learned Dr. *James*,* in his introductory preface, tracing the practice of physic thro' its different revolutions.

This last-mentioned gentleman observes, that of all the people, of whom history gives us any information, the *American Indians* appear, with respect to *physic*, to have been the wisest; as indeed it is indisputably better to have no theory at all, than one that is bad, and capable of introducing errors into practice.

Don *Antonio de Solis*, speaking of *Montezuma*, emperor of Mexico, says, that there was nothing to be seen in his gardens but flowers of delightful variety and fragrancy; with medicinal herbs, set in squares; and summer-houses, where he used to sup.

He took a particular care to transplant into his garden all the choice simples that benign cli-

* See Dr. *James*'s introductory preface to his medicinal dictionary.

* See history of the conquest of Mexico, by Don *Antonio de Solis*, vol. 1, page 329.

climate produced; where the only study of the physicians was to attain to the knowledge of their names and properties. They had herbs for all kinds of pains and infirmities; and in the juices and application of these herbs consisted all their remedies; and with these they effected surprizing cures, having by long experience found out their virtues; and, without distinguishing the cause of the distemper, applying them, to the patient's great benefit and recovery.

The king freely distributed to all, who had occasion for them, such of his simples as were prescribed by the physicians, or desired by the sick; and was wont to enquire if the patient had received any benefit therefrom: either gratifying a sort of vanity he had, in the successful operation of his medicines; or believing that he fulfilled the obligation of a sovereign, in taking such care of the health of his vassals.

Don *Antonio de Solis*, in another place, speaking of the sickness of *Cortez*, informs us, that the senate sent for all the best physicians of their country; whose skill consisted entirely in the knowledge and choice of medicinal herbs; which they apply'd with
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a wonderful discernment of their virtues and effects; varying the medicines according to the condition and different turns of the distemper. And to them he was entirely beholden for his cure. For, making use at first of wholesome, cooling simples, to correct the inflammation, and mitigate the pain, which occasioned the fever, they proceeded by degrees to apply others, proper to ripen and heal the wound; with so much skill and good fortune, that in a little time they restored him to his perfect health.

REMARK *the First.*

Let the *rational physician* laugh as much as he pleases at *empirics*; it is certain, however, that the first knowledge of physic was entirely from experience. And in a country entirely unacquainted with natural philosophy, (which searches out causes by effects) it was no small matter, to find so great a progress made in the knowledge of nature, as we find among these Indians.

REMARK *the Second.*

Theory cannot assume, with any appearance of reason, the power of discovering the virtues of simples, in curing distempers; tho'
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by investigating the causes of disorders, it may adapt known remedies with greater propriety, and perhaps with greater success to particular cases; provided always that the theory has its foundation more in truth, than in the imagination of the whimsical and trifling.

REMARK *the Third.*

In consequence, therefore, of neglecting all manner of theory, and cultivating experience alone, the *American Indians* have been able to discover to the Europeans the most effectual medicines yet known; as the *Peruvian bark*, *ipécacuabna*, and a multitude of others; for which we are indebted to the experience of the illiterate inhabitants of the new world: whilst all the boasted learning of the Europeans has been so little productive of improvements in physic; that, with respect to our own plants, we know very little more of their virtues, than what we have learned from *Dioscorides*, and some others of the ancients: and as to distempers, those that were deemed incurable two thousand years ago, would have remained so to this day, if the experience of the virtues of the *peruvian bark*, *ipécacuabna*, *rhubarb*, and *this oil*, had not furnish'd us with the means of relieving patients labouring under some few. To

To conclude.—Dr. *James* likewise makes this farther remark : that many medicinal discoveries have been brought about by inspiration (that is, by the peculiar direction of providence) which are usually attributed to accident ; otherwise, it should seem very surprising, that after the labour of a multitude of men, both of learning and abilities, who have spent their entire lives in physical researches, and after all the advantages of our reason, we find (to the mortification of human wisdom) that the most important remedies have been originally discovered by *savages* and *madmen* : whilst they had nothing less in view than the improvement of physic. By the latter I mean the *Alchemists* ; who, in their pursuits after the transmutation of metals, have blundered upon some medicines of efficacy.—Thus we are told in scripture : *God has made foolish the wisdom of the world ; and God has chosen the foolish things of the world, to confound the wise.*



F I N I S.